

M-310

Series of Miniature Translation Stages

Ordering Information

M-311.00

Miniature Translation Stage, 6 mm

M-312.00

XY Miniature Translation Stage, 6 mm

M-313.00

XYZ Miniature Translation Stage, 6 mm

M-311.80

Miniature Translation Stage with PiezoMike Drive, 6 mm

M-312.80

XY Miniature Translation Stage with PiezoMike Drive, 6 mm

M-313.80

XYZ Miniature Translation Stage with PiezoMike Drive, 6 mm

Note:

M-318.20 Angle Bracket (F-010 fiber holder—> M-313)

M-318.30 Combination Plate 30 x 30 mm

M-318.00 Z-axis Mounting Bracket (included in M-313)

M-318.40 Adapter Plate for Honeycomb Tables, 1" & 25 mm

Custom Designs for Volume Buyers

- **Extremely Compact**
- **All-Stainless-Steel Construction**
- **X, XY and XYZ Versions**
- **Optional PiezoMike for Nanometer Resolution**
- **4 mm Clear Aperture**
- **Linear Ball Bearings**

The M-310 series of translation stages are our smallest micrometer-driven positioners. The carriage is spring preloaded against the micrometer tip for elimination of backlash. M-310 series stages are available in one-, two- or three-axis configurations. The latter consists of a two-axis stage, an angle bracket and a one-axis stage. Please note that an XY unit cannot be separated into two one-axis stages. The vertical stage in the M-313 XYZ assembly supports the load through the micrometer spindle (not the preload springs) providing excellent stability.

PiezoMike Option

Versions with PiezoMike drive provide an additional 25 µm fine range for remotely controlled ultra-high resolution (e.g. scanning or tracking). See page 7-76 for further details. A special version with piezo block NanoActuators is available as product number F-111 (see p. 8-22 in the "Photonics" section, for more examples of M-310 series stages in photonics alignment and packaging)



M-311.00, M-312.00, M-313.00 miniature translation stage



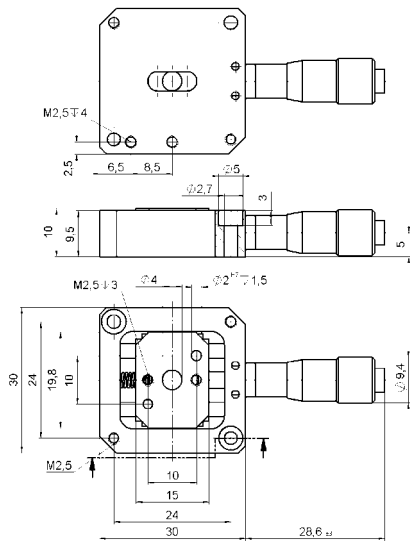
M-313.00 XYZ stage with M-318.20 angle bracket and F-010.00 fiber holder mounted on a pillar pin with M-318.30 adapter plate. See the F-111 on p. 8-22 in the Photonics" section, for more examples of M-310 series stages in photonics alignment and packaging.



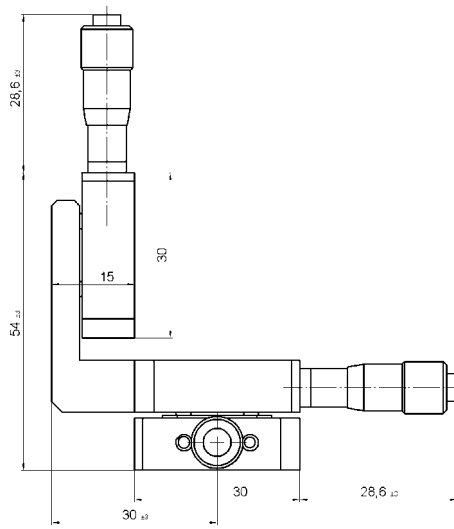
M-313.80 XYZ stage with P-853 PiezoMikes and optional M-318.20 angle bracket and F-010.00 fiber holder

Notes

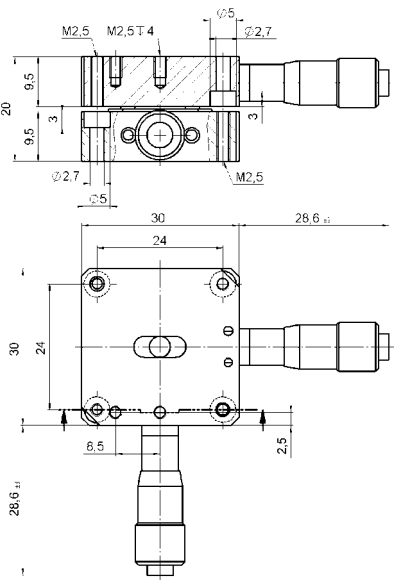
See "Accessories," page 7-82 ff. for adapters, brackets, etc.



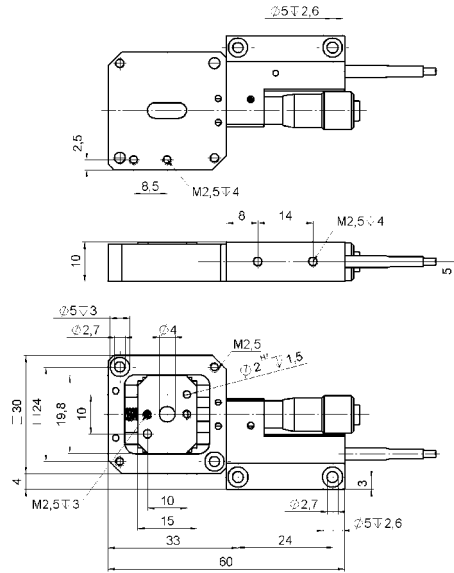
M-311.00 dimensions (in mm)



M-313.00 dimensions (in mm)



M-312.00 dimensions (in mm)



M-311.80 dimensions (in mm)

Technical Data

Models	M-311.00	M-311.80	Units	Notes see p. 7-96
Travel range	6	6	mm	
PZT fine travel range	-	25	µm	
Min. incremental motion (PZT drive)	-	0.01	µm	A4
Min. incremental motion (micrometer drive)	1	1	µm	A4
Backlash	2	2	µm	
Straightness	0.4	0.4	µm	
Max. normal load capacity	4	4	kg	B1
Max. push/pull force	20 / 1	20 / 1	N	B2
Drive	M-619	P-853		
Micrometer pitch	0.5	0.5	mm/rev.	
Weight	58	100	g	
Body material	N-S	N-S	N-S	L
Recommended PZT driver (codes explained p. 6-46)	-	A, C, G		